

The Heterodyne

Newsletter of the West Valley Amateur Radio Association

May Meeting via Zoom

SWR - Who Cares?
by **Kristen McIntyre, AG6GX**

Wednesday, May 12
Meeting Starts at 7pm
Visitors Are Welcome!

Due to the corona virus, there will not be a meeting at American Red Cross.

WVARA Repeaters (W6PIY)		
Band	Frequency	PL
6 Meters*	52.580- MHz	151.4 Hz
2 Meters	147.39+ MHz	151.4 Hz
1.25 Meters	223.96- MHz	156.7 Hz
0.70 Meter	441.35+ MHz	88.5 Hz
0.23 Meter	1286.2- MHz	100 Hz

*** The 6 Meter repeater is currently down**

WVARA's club net is on the W6PIY repeaters each Tuesday at 8:30 pm. All repeaters are linked together during the net. The net control script can be found at www.wvara.org in the "On The Air" dropdown.

Zoom Meeting Information: Zoom details have been released via the WVARA email reflector. If you aren't yet a WVARA member and would like to attend, feel free to contact me via k6ei@wvara.org for the Zoom meeting details.



Kristen McIntyre, K6WX

The primary speaker at WVARA's May 12 meeting will be Kristen McIntyre, K6WX, who will cover the topic of "SWR — Who Cares?" and will debunk some of the misconceptions and misunderstandings regarding the widest used measurement in ham radio — the Standing Wave Ratio. Topics to be covered by Kristen will include what it is, how it is calculated, what SWR actually measures, and what we should care about – including what an impedance match is, the impact of SWR on real transmission line loss, how to match a transmitter to a load and how to measure feedpoint impedance. I'm looking forward to learning a thing or two!

Kristen has been interested in radio since she was about 5 years old. She started in Amateur Radio in 1979, getting her ticket while at MIT. Kristen has worked in many diverse areas from analog circuit design to image processing to starting and running an ISP. She is currently

working at Apple in Core Networking, and spent many years at Sun Microsystems Laboratories where she was researching robustness and emergent properties of large distributed computer systems. She is a long time denizen of Silicon Valley and has worked at or consulted for many of the usual suspects. Kristen is an active ham and loves to chase DX on HF with her Elecraft K2 which she built while visiting her mother in Florida. She is ARRL Pacific Division Director, president of the Palo Alto Amateur Radio Assoc., the Q&A columnist for Nuts and Volts magazine, and is active in many local clubs. Kristen was recently inducted into the CQ Amateur Radio Hall of Fame.

Secondary Topic: In addition, at each of the next three monthly meetings we're going to include a very short, Field Day-related topic. This month, Bill Frantz, AE6JV, will give us a 5-minute rundown on how to have loads of fun operating FT8 during Field Day.

Hope to see you there!

Jim, K6EI, WVARA Vice President

Upcoming Meetings			
May 12	Kristen McIntyre, K6WX	SWR -- myths and misconceptions	via Zoom
June 9	Clint Bradford, K6LCS	Working Amateur Sats from your HT	via Zoom
July	no meeting		
August 21	BBQ in the park	at Baylands Park, Sunnyvale	in person
Sept 8	Teri Grizer, K8MNJ	Grounding/Bonding for RFI Mitigation	via Zoom

Field Day 2021 Update

As always, Field Day will be the fourth full weekend of June, which this year occurs on June 26-27. Our club has done Field Day from the top of Mora Hill fourteen years in a row. Unfortunately, last year's state and county COVID-19 restrictions forced us to operate in a less centralized way, and that situation is expected to be the case this June as well.

I remain in contact with Rancho San Antonio Open Space Reserve management regarding Mora Hill and Field Day 2021. As conditions now stand, they are not authorizing any group activities within the open space reserve this spring, and their expectation is that COVID restrictions will remain in place through June — including Field Day weekend. I am going to maintain contact with the Open Space folks and will let you know if the Mora Hill situation changes in our favor prior to Field Day.

As things now stand, WVARA like last year will conduct Field Day in a decentralized way. Ways that WVARA members can operate Field Day include: Class B - Battery (one or two person portable / Battery), Class C (mobile), Class D (home station, commercial power), and Class E (home station, emergency power). For Field Day 2021, the ARRL has loosened the rules so that Class D stations may work all other Field Day stations, including other Class D stations, for points. Class D and Class E stations will be limited to 150 W PEP output. We'll cover Field Day 2021 in greater detail in the next Het.

Of course, you don't need to operate CW or SSB in order to participate in Field Day. During this month's WVARA meeting Bill Frantz, AE6JV, will give a brief informational presentation on how to get involved in Field Day 2021 using FT8.

And as always, the ARRL Field Day web page (<http://www.arrl.org/field-day>) contains complete rules and entry forms, as well as any updated information as it becomes available.

- Jim, K6EI, WVARA Field Day Coordinator

A Mini-DXpedition during the Area 7 QSO Party

Jim Peterson, K6EI/7

Each year in early May, most of the counties in Callsign Area 7 are active during the 7 QSO Party – i.e. “7QP”. This is a great opportunity for county hunters to contact those rare ones. It also gives us city dwellers an opportunity to experience a mini-DXpedition by operating portable from one of the rarer locations.

This year, I had a blast operating in 7QP from a rare county in NE Washington. Ferry County has just one town (Republic, population 1000), no resident hams, and was inactive in 7QP the past few years. As a result, this county was in high demand during the contest.

I stayed in an AirBnB on a small hill near town and set up a simple G5RV on a 25ft mast and used the callsign K6EI/7. While my site had a clear downward slope toward California to the south, there was a large ridge to my east which blocked much of my signal to the Midwest and East Coast. Even so, being in a rare county felt like it was worth at least 10 dB of gain with lots of pile-ups responding to my CQs. My final count was 475 QSOs (460 CW, 15 SSB).

It was a real hoot being out in the woods. A flock of wild turkeys kept inspecting my antenna. And having pile-ups calling me was a real rush. Next year I may operate 7QP from my cabin at Loon Lake in Stevens County, Washington — not truly rare, but rare enough to still draw attention plenty of attention.

- Jim, K6EI



The MILL by Tom Dunbar, W6ESL

A long time ago, I was taught to touch type as part of one of my Air Force technical schools. I did not realize that this was going to be helpful in the long run. For a two week period, we learned to clean and adjust a Remington standard typewriter, followed by endless drills of typing specific letters, with timed quizzes once we had all the keyboard mastered. We had to pass a 35 WPM test – at least – that is as I remember it now.

In the next class, we were introduced to the Remington Mill. What is that you ask? It is a typewriter that was designed to be used for radiomen – the font was 9 point, san serif, and the O looked like this: 0. I actually have a mill font that I can use when I type a document.

So, once into my final duty assignment, I spent many hours daily using a Mill – we had Remington's and Royals, although Smith Corona and Underwood made units were around. These machines were well used, as we had to make sure the sixth carbon copy was legible, so we essentially engraved the first copy - they looked like stencils. Strong hands were developed.

Typewriter repairmen hated us. We broke the machines. They malfunctioned. A number were turned into basket cases when they were dropped from being thrown against the wall. A love hate relationship.

Why all this background? I was given a former US Navy Royal Arrow portable Mill back in the early 80's. It is older than I am. I played with a while and then, it got put away. Last fall, I dug it out and after sitting for 35 years or so, it didn't do too well, the ribbon was dry, and the keys all stuck. There is a place – Los Altos Typewriter and Business Machines – that still services typewriters. So for a fee and 3 days wait, I got a machine back that was cleaned, oiled, and had a new ribbon. Potentially just like when it rolled off the assembly line in New York in mid 1942.

We are now spoiled. We use electronic keyboards. No real pressure is needed to activate the keys. The hands and fingers are weak. Even set for the lightest pressure possible, the Mill demands quite a lot of downward pressure on the keys.

I am also having to learn to type again on a mechanical machine. The QWERTY part of the keyboard is the same, but the symbols are in different places, so that is going to cause some issues. And there is no @ sign on the keyboard at all, although it does have the (cent) symbol.

And I am relearning all the tricks for loading the paper, setting the margins, and if you want a copy – carbon paper? No – that is asking a little too much – if I need a copy, I will scan it on the ink jet printer.

Why – do you ask – why a Mill. Well, let us say you want to learn CW, and you want to do code groups for some reason – and your hand writing is atrocious. Well – I have a Mill, why not use it?

Plus I was told by some of the fellows that I worked with a long time ago – with enough practice, the fingers just type the letters the ear hears – the conscious brain doesn't get involved. I watched fella's do just that, one ear covered, the other uncovered so they could carry on a conversation with the guy next to him, all the type pounding out copy at 30 WMP. I want to find out if that is true for me... this may take awhile. I'll keep you informed.

AR

2020 Treasurer's Report

Hello Everyone,

The final 2020 Treasurer's report is now in the Members Only section of the WVARA website (<https://wvara.org/wordpress/west-valley-ara/>). Overall, we had a good year despite COVID, shelter in place, and loss of the flea market.

73,
Russ WD9DD

WVARA Net Check-Ins (W6PIY)					
Tuesdays at 8:30 PM					
Call Sign	Name	04/13/21	04/20/21	04/27/21	05/04/21
Total		24	21	21	17
AA6RB	Roy		X	X	X
AF6AE	Bill	X	X	X	X
K6ACE	Larry				X
K6EI	Jim	X	X		
K6LOH	Celeste	X			X
K6QFO	Mike	X		X	X
K6VP	Dan	X	X	X	X
KC6ZKT	Steve	X	X	X	X
KC7XE	Stan	X			
KF6EMB	Svend	X	X	X	X
KJ6CW	Jim			X	
KK6GXH	David	X	X	X	
KK6HPF	Ross	X	X	X	X
KK6VF	Kevin	NET	NET	NET	NET
KN6FGH	Tim	X	X	X	X
KN6KHV	Scott	X			
KN6MTI	Jim			X	
KN6OGS	Ryan			X	
KX6B	Dick	X	X		
N6BTU	Wayne		X	X	
N6FYR	Matt	X		X	
NU6P	John		X		
W1MVY	Scott	X	X	X	
W6BG	Max	X			
W6ESL	Tom	X		X	X
W6IA	Mark	X	X	X	X
W6MNL	Steve		X		
W6PK	Phil	X		X	X
W8RJL	Ron	X	X		
WB6JHI	Steve	X	X		X
WB6KHP	Dave	X	X	X	X
WR3K	Greg		X		
WR6Z	Dave	X	X	X	X

RF Exposure Calculations by Tom Dunbar, W6ESL

I have seen a couple of blurbs from the League about this, but no real place to go to get guided through the necessary calculations.

I have joined a special interest group - the Straight Key Century Club, and today there were several emails about calculators to use.

At the end of several exchanges on the reflector, the calculator that appears to be the most informed is at: https://hintlink.com/power_density.htm.

Soo, since I fiddled with all my antennas, I went through and did my calculations. No issues - so long as I stay at or below 100 watts.. I went through all the radios setups, including my GMRS base station.

I did not calculate the average power, which would have made my station even better looking.

I would recommend folks read the whole calculator web page as it talks about average power, etc etc., before doing the calculations, especially if they are running power - it will make a difference.

Tom D W6ESL

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